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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,430	10/14/2003	Eric L. Ahlvin	100202869-1	7283
22879	7590	10/07/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			DICTH, RACHEL S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/686,430	AHLVIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rachel Dicht	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 13 September 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.  
 4a) Of the above claim(s) 24 and 25 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-21 is/are rejected.  
 7) Claim(s) 22 and 23 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 14 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/21/2005</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input checked="" type="checkbox"/> Other: <u>IDS filed on 10/14/2003</u> .

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I in the reply filed on 9 September 2005 is acknowledged. No arguments were made against restriction.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US Pat. No. 6,151,037) in view of King et al. (European Pat. EP 1 078 755 A2).

In regard to:

Claims 1 and 11:

Kaufman et al. teaches in combination, (1) a thermal printhead (40, Fig. 4) and (2) an inkjet printhead (64, Fig. 6), both mounted in an inkjet printer (20, Fig. 1), said inkjet printhead configured for printing inkjet ink to form images on a sheet of print media (refer to column 4 lines 21-33).

It is noted however, that Kaufman et al. fails to teach said print media including a sealable porous topcoat on an ink-receiving microporous layer, said thermal printhead adapted to seal said sealable porous topcoat by providing a source of heat to said sealable porous surface coat following said printing of images.

However, King et al. teaches said print media including a sealable porous topcoat on an ink-receiving microporous layer, said thermal printhead adapted to seal said sealable porous topcoat by providing a source of heat to said sealable porous surface coat following said printing of images (refer to paragraph [0009]).

Claim 21:

The device of Kaufman et al. DIFFERS from claim 21 in that it fails to teach a combination wherein said at least one ink-receiving layer comprises at least one pigment and at least one binder.

However, King et al. teaches a combination wherein said at least one ink-receiving layer comprises at least one pigment and at least one binder (refer to paragraph [0013] and [0014]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kaufman et al. to include a print media with a sealable porous topcoat on an in-receiving microporous layer as taught by King et al. for the purpose of creating a protected image from water, scratching, rubbing, and environmental influences.

3. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US Pat. No. 6,151,037) in view of King et al. (European Pat. EP 1 078 755 A2) in further view of Seo et al. (Japanese Pat. No. JP 02002240231A)

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 2 and 12 in that it fails to teach the combination wherein said inkjet printhead is supported and moved on a carriage across a scan axis, along a print zone, perpendicular to the direction of print media advance and wherein said thermal printhead is positioned with said inkjet printhead on said carriage to seal said sealable porous surface coat following printing of said image.

However, Seo et al. teaches the combination wherein said inkjet printhead (12, Fig. 2) is supported and moved on a carriage (11, Fig. 2) across a scan axis (double headed arrow located in Fig. 2), along a print zone, perpendicular to the direction of print media advance and wherein said thermal printhead (13, Fig. 2) is positioned with said inkjet printhead (12, Fig. 2) on said carriage (11, Fig. 2) to

seal said sealable porous surface coat following printing of said image (refer to Solution of Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kaufman et al. as modified by King et al. to include a thermal print head located on the same carriage as an ink jet print head as taught by Seo et al. for the purpose of easily and rapidly making an image with little bleeding.

4. Claims 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US Pat. No. 6,151,037) in view of King et al. (European Pat. EP 1 078 755 A2) in further view of Eldridge et al. (US Pat. No. 5,059,989)

In regard to:

Claims 3 and 13:

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 3 and 13 in that it fails to teach the combination wherein said thermal printhead comprises:

- (a) a substrate;
- (b) a resistive heating element formed on said substrate, said resistive heating element having two opposed ends;

- (c) two electrical contacts, one contacting each said end of said resistive heating element;
- (d) two connectors and two conductors, each connector electrically connected to a said electrical contact by a said conductor; and
- (e) a passivation coating protecting said resistive heating element, said two electrical contacts, and at least a portion of said two connectors.

However, Eldridge et al. teaches the combination wherein said thermal printhead comprises:

- (a) a substrate (20, Fig. 1);
- (b) a resistive heating element (15 and 26, Fig. 4) formed on said substrate, said resistive heating element having two opposed ends;
- (c) two electrical contacts (23 and 24, Fig. 3), one contacting each said end of said resistive heating element (26, Fig. 3); and-
- (d) two connectors (12 and 14, Fig. 3) and two conductors (edges of conductive electrodes 12 and 14, Fig. 3) each connector electrically connected to a said electrical contact by a said conductor.
- (e) a passivation coating (25, Fig. 4) protecting said resistive heating element, said two electrical contacts, and at least a portion of said two connectors (refer to column 3 lines 48-51).

**Claims 4 and 14:**

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 4 and 14 in that it fails to teach a combination wherein said resistive heating element is rectangular.

However, Eldridge et al. teaches a combination wherein said resistive heating element (15 and 26, Fig. 3) is rectangular.

**Claims 5 and 15:**

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 5 and 15 in that it fails to teach a combination wherein said resistive heating element comprises a thin film or think film resistor.

However, Eldridge et al. teaches a combination wherein said resistive heating element comprises a thin film or think film resistor (refer to column 2 lines 66-67).

**Claims 6 and 16:**

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 6 and 16 in that it fails to teach the combination wherein said two electrical contacts may be the same or different and comprise an electrically conducting material.

However, Eldridge et al. teaches the combination wherein said two electrical contacts (23 and 24, Fig. 3) may be the same or different and comprise an electrically conducting material (refer to column 3 lines 33-51).

Claims 7 and 17:

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 7 and 17 in that it fails to teach the combination wherein said two connectors may be the same or different and comprise an electrically conducting material.

However, Eldridge et al. teaches the combination wherein said two connectors may be the same or different and comprise an electrically conducting material (refer to column 3 lines 33-51).

Claims 8 and 18:

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 8 and 18 in that it fails to teach the combination wherein said two conductors may be the same or different and comprise an electrically conducting material.

However, Eldridge et al. teaches the combination wherein said two conductors may be the same or different and comprise an electrically conducting material (refer to column 3 lines 33-51).

Claims 9 and 19:

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 9 and 19 in that it fails to teach a combination wherein said substrate compromises and insulation material.

However, Eldridge et al. teaches a combination wherein said substrate compromises and insulation material (refer to column 3 lines 11-12).

Claims 10 and 20:

The device of Kaufman et al. as modified by King et al. DIFFERS from claims 10 and 20 in that it fails to teach a combinations wherein said passivation coating comprises fused glass or silica.

However, Eldridge et al. teaches a combinations wherein said passivation coating comprises fused glass or silica (refer to column 3 lines 48-51).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kaufman et al. as modified by King et al. to include a printhead that comprises two connectors and two conductors and is protected by a passivation coating as taught by Eldridge et al. for the purpose of allowing high frequency operation and stacked arrays that are suitable for high resolution color printing.

***Allowable Subject Matter***

5. Claims 22, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the allowance of claims 22, and 23 is the inclusion of the limitations of:

**Claim 22:**

The combination wherein said at least one pigment is selected from the group consisting of highly porous silica, alumina, hydrates of alumina, titania, zirconia, bas metal oxides, carbonates, glass beads, and hard ball, wherein said at least one binder is selected from the group consisting of gelatin, polyvinyl pyrrolidone, water-soluble cellulose derivatives, polyvinyl alcohol and its derivatives, polyacrylamide, polyacrylic acid, water-soluble acrylic acid co-

**polymers, and wherein said at least one ink-receiving layer has a porosity within a range of 25 to 28 cm<sup>3</sup>/m<sup>2</sup>.**

Claim 23:

The combination wherein said sealable porous topcoat comprises either a binder selected from the group consisting of gelatin, polyvinyl pyrrolidone, water-soluble cellulose derivatives, polyvinyl alcohol and its derivatives, polyacrylamide, polyacrylic acid, water-soluble acrylic acid co-polymers, or a pigment comprising a film-forming latex, **and wherein said topcoat has a pore size in a range of about 4 to 15 nm.**

It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel Dicht whose telephone number is 571-272-8544. The examiner can normally be reached on 7:00 am - 3:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RSD



September 27, 2005



10/4/05  
**MANISH S. SHAH**  
**PRIMARY EXAMINER**